



Name: \_\_\_\_\_

## Salmonid Species

**Directions:** Use the readings about chinook, Coho, and steelhead to answer the following questions. Fill in the blanks with the correct words or numbers.

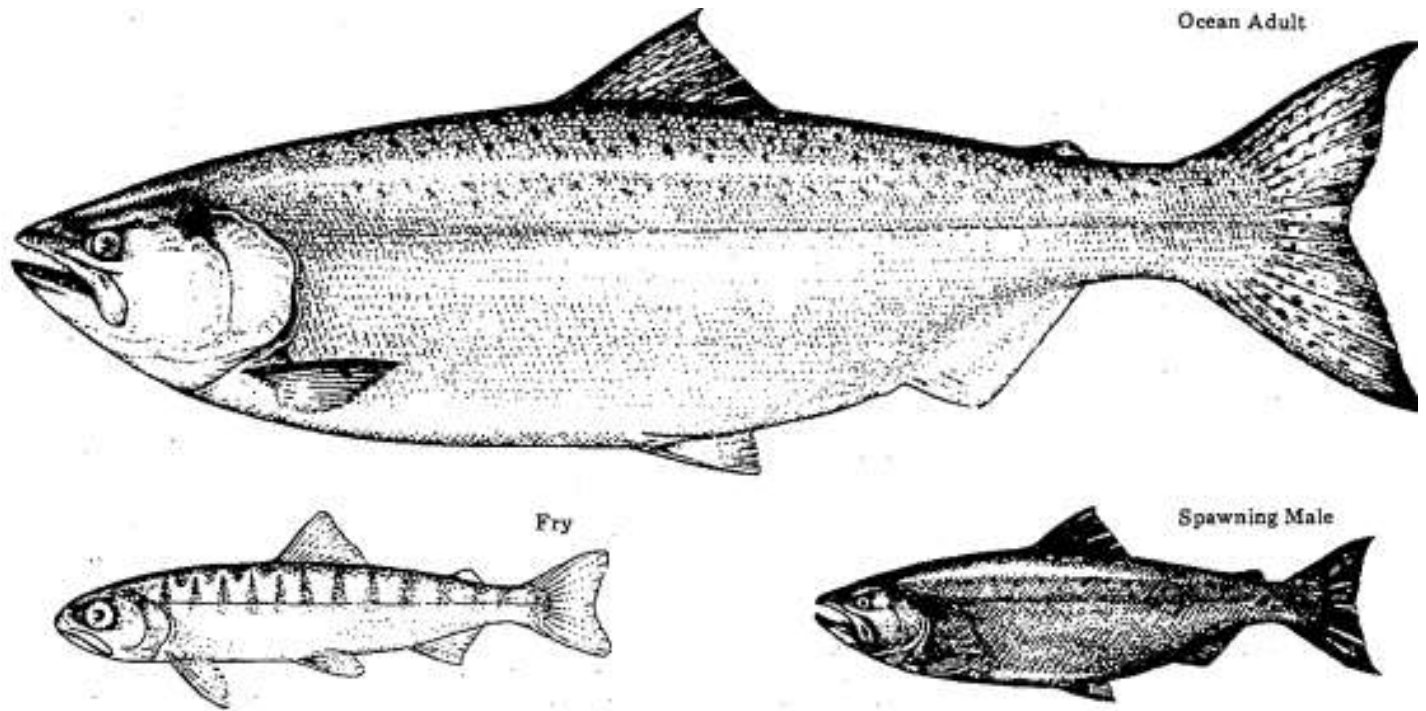
1. Of the two salmon, the \_\_\_\_\_ probably ranges less in the ocean.
2. The \_\_\_\_\_ is the largest of these three fish.
3. \_\_\_\_\_ are very good jumpers and can jump over waterfalls that are too high for other species. Because of this, they can get into streams where others cannot go.
4. The \_\_\_\_\_ may migrate to the ocean when they are only a few months old.
5. A chinook salmon may lay as many as \_\_\_\_\_ eggs.
6. The fish you might find in a river near San Diego is the \_\_\_\_\_.
7. Another name for the coho salmon is the \_\_\_\_\_.
8. A chinook salmon may stay in the ocean for up to \_\_\_\_\_ years. The coho, however, only stay in the ocean for about \_\_\_\_\_ years.
9. The species that varies the most in the amount of time spent in the river and in the ocean is the \_\_\_\_\_.

**Use complete sentences to answer the following questions:**

10. Compare what happens to salmon and steelhead after they spawn.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
11. Coho often migrate downstream at a certain time of day. When do they go and why do they choose to go then?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
12. **Challenge:**  
Why do you think these three species of salmonids use different kinds of spawning sites? (Write your answer on the back of this page. Hint: there may be more than one reason!)



# Chinook Salmon



The Chinook is the largest of the five Pacific salmon species. California chinook may weigh as much as 80 pounds and grow over four feet long. Probably because of their grand size, they are also called king salmon.

The San Joaquin River is as far south as these fish will be found in fresh water. The young fish may spend only two or three months in the river before swimming down to the estuary. Some fish may stay longer in fresh water, up to a year. Sometimes chinook will stay several months in the estuary before entering the ocean.

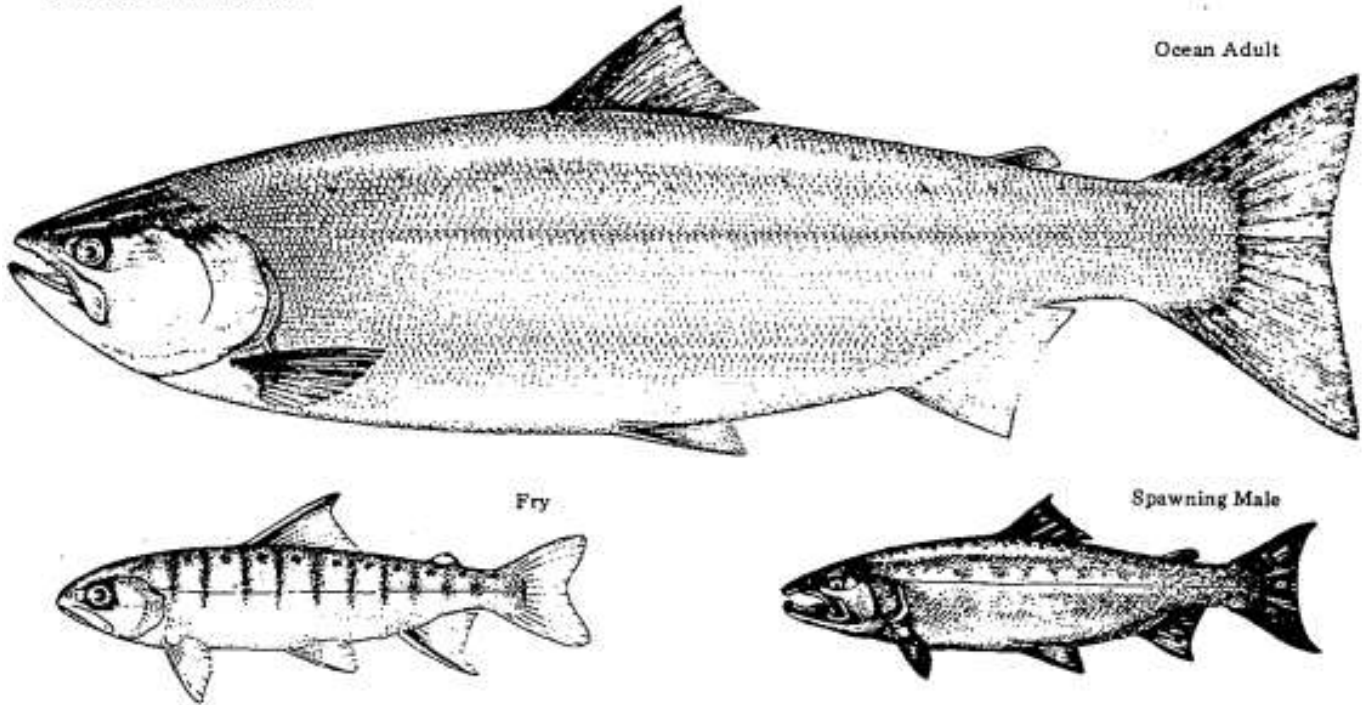
Once they are in the ocean, king salmon usually go north, but the direction they go and how far they range depends on where they can find food. California chinook may range as far north as Washington.

Chinook return to the river where they were born to spawn anytime from the age of two to seven. Most fish will enter freshwater in the fall, but a few come back in the spring. The fish like to spawn in larger sections of streams, where the water is fairly deep. The female salmon chooses rather large gravel and digs a redd that may be 8 - 24 inches deep. She can lay as many as 10,000 eggs. After spawning, the salmon die.



# Coho Salmon

*Oncorhynchus kisutch*



Coho salmon are also called the silver salmon. This species may grow as long as 16 to 32 inches and weigh between 7 and 12 pounds. The largest ones found have been around 20 pounds.

The Big Sur River is the southern extent of spawning habitat for coho salmon. During the time they spend in the ocean, they may go as far south as Baja California, and as far north as Oregon. They usually do not range as far as the chinook salmon do.

Young coho fry spend about a year in fresh water. When they migrate to the estuary, they often move at night, during a new moon. After spending about two years in the ocean, they return to the stream where they were born. Most enter fresh water from November through January.

Coho often use smaller streams for spawning than chinook, but they also spawn in the main stems of rivers. They choose water that is about 7 - 15 inches deep, and medium sized gravel for their redd location. Female coho lay, on the average, about 3,000 eggs. As with all salmon, coho die soon after they spawn.

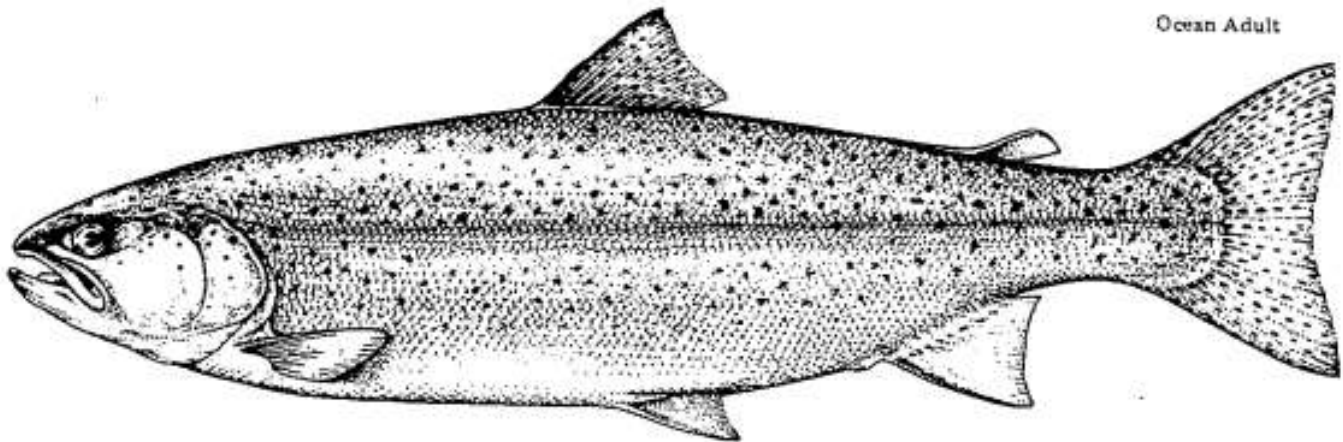




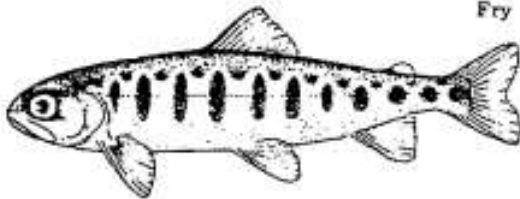
# Steelhead Trout

*Oncorhynchus mykiss* (formerly *Salmo gairdneri*)

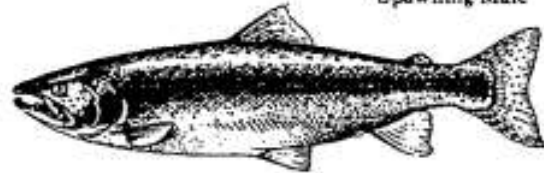
Ocean Adult



Fry



Spawning Male



Steelhead trout are closely related to the Pacific salmon species. They are a sea-going rainbow trout. Because they range in the open ocean, they grow much bigger than rainbow trout that stay in streams. Their average weight is about 5-10 pounds, depending on the stream. They may get as big as 28 pounds and measure over three feet long.

They live in streams and rivers all along the California coast, in tributaries to the Sacramento River and in Northern Baja California. Steelhead trout spend anywhere from 1 to 4 years in freshwater. After smolting, they take up residence in the ocean, where they may live for 1 to 4 years.

Usually, California steelhead begin to migrate back to freshwater after two years. Their ocean range is not well known, but they probably go north rather than south. They return to spawn either in the summer or in the winter. Those that come back in the summer wait until winter to spawn.

Steelhead can use intermittent streams for spawning, and can get into smaller tributaries than salmon can. They are very good jumpers, and may leap over barriers that are 15 feet high. They like gravel similar to that chosen by coho, but they can spawn in quite shallow water. Steelhead trout often go back to the ocean after spawning. Some females have been known to spawn four times before they die.